

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-142 (Canceled).

Claim 143 (New). A glycoengineered, recombinant antibody comprising an immunoglobulin Fc region containing N-linked oligosaccharides, wherein said glycoengineered, recombinant antibody has increased bisecting GlcNAc residues on said N-linked oligosaccharides and increased Fc-mediated cellular cytotoxicity compared to a corresponding antibody that has not been glycoengineered.

Claim 144 (New). A glycoengineered, recombinant antibody comprising an immunoglobulin Fc region containing N-linked oligosaccharides, wherein said glycoengineered, recombinant antibody has increased bisecting GlcNAc residues on said N-linked oligosaccharides and increased Fc receptor binding affinity compared to a corresponding antibody that has not been glycoengineered.

Claim 145 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein said bisecting GlcNAc residues are carried on complex N-linked oligosaccharides.

Claim 146 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein said bisecting GlcNAc residues are carried on hybrid N-linked oligosaccharides.

Claim 147 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein said bisecting GlcNAc residues are carried on complex, hybrid N-linked oligosaccharides.

Claim 148 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is a chimeric antibody.

Claim 149 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is a humanized antibody.

Claim 150 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is an antibody fragment that contains an Fc region.

Claim 151 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is a fusion protein that contains an immunoglobulin Fc region.

Claim 152 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody selectively binds to an antigen expressed by cancer cells.

Claim 153 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein said antibody is a monoclonal antibody.

Claim 154 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is a therapeutic antibody.

Claim 155 (New). The glycoengineered recombinant antibody of claim 154, wherein said antibody is a selected from the group consisting of: an anti-CD20 antibody, an anti-human neuroblastoma antibody, an anti-human renal cell carcinoma antibody, an anti-HER2 antibody, an anti-human colon, lung, and breast carcinoma antibody, an anti-human 17-1A antigen antibody, a humanized anti-human colorectal tumor antibody, an anti-human melanoma antibody, and an anti-human squamous-cell carcinoma antibody.

Claim 156 (New) The glycoengineered, recombinant antibody of claim 155, wherein said antibody is an anti-CD20 antibody.

Claim 157 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said Fc region is an IgG.

Claim 158 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein said Fc region is human.

Claim 159 (New). A process for producing a glycoengineered, recombinant antibody comprising an immunoglobulin Fc region containing N-linked oligosaccharides having an increased proportion of GlcNAc residues on said N-linked oligosaccharides and increased Fc-mediated cellular cytotoxicity or increased Fc receptor binding compared to a corresponding antibody that has not been glycoengineered, wherein said antibody is produced by a process comprising:

- (a) providing a mammalian host cell comprising at least one nucleic acid encoding a recombinant antibody;
- (b) genetically manipulating said host cell to alter the activity of GnTIII in said host cell;
- (c) culturing said host cell under conditions which permit expression of said glycoengineered, recombinant antibody; and
- (d) isolating said glycoengineered, recombinant antibody.

Claim 160 (New) The glycoengineered, recombinant antibody of claim 159, wherein said altered activity is increased expression of GnTIII.

Claim 161 (New) The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said antibody is isolated from a host cell that has been genetically manipulated to have altered expression of a glycoprotein-modifying glycosyltransferase.

Claim 162 (New). The glycoengineered, recombinant antibody of claim 161, wherein said antibody is a therapeutic monoclonal antibody having a human Fc region and that selectively binds an antigen expressed by cancer cells.

Claim 163 (New). The glycoengineered, recombinant antibody of claim 161, wherein said glycoengineered, recombinant antibody exhibits up to about an 80% increase in maximal ADCC activity compared to a corresponding antibody that has not been glycoengineered.

Claim 164 (New). The glycoengineered, recombinant antibody of claim 161, wherein said glycoprotein-modifying glycosyl transferase is GnTIII.

Claim 165 (New). The glycoengineered, recombinant antibody of claim 164, wherein said altered expression is increased GnTIII expression.

Claim 166 (New). The glycoengineered, recombinant antibody of claim 161, wherein said host cell is selected from the group consisting of: a CHO cell, a BHK cell, an NS0 cell, an SP2/0 cell, a yeast cell, and a plant cell.

Claim 167 (New). The glycoengineered, recombinant antibody of claim 166, wherein said host cell is a CHO cell.

Claim 168 (New). The glycoengineered, recombinant antibody of claim 143 or 144, wherein up to about 50% of the oligosaccharides in the Fc region are complex structures.

Claim 169 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said immunoglobulin Fc region is an entire IgG Fc region.

Claim 170 (New). The glycoengineered, recombinant antibody of claim 143 or claim 144, wherein said immunoglobulin Fc region containing N-linked oligosaccharides comprises an Fc region fragment.

Claim 171 (New). The glycoengineered, recombinant antibody of claim 170, wherein said Fc fragment comprises a CH2 domain.